

REMARKS

By this Amendment and Reply, no claims were amended, cancelled or added. Accordingly, Claims 31-113 remain pending for further examination.

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Allowable Subject Matter:

In the Office Action the Examiner objects to Claims 38-51, 53, 54-90, 92, 95-101 and 103-111 as being dependent upon a rejected base claim, but notifies Applicant that these claims would be allowable if rewritten in independent form including all of the limitation of the base and any intervening claims. The Examiner is thanked for this notification.

It is respectfully submitted that in view of the argument submitted herein, these claims are already in condition for allowance at least since they depend from and further limit an allowable base claim. Accordingly, no amendment is believed necessary.

Applicants note that the Office Action fails to indicate whether Claim 113 is rejected or objected to. It is respectfully requested that if this claim is rejected or objected in a later Office Action, such Action be **non-final**.

Drawing Requirement under 37 CFR 1.81:

In the Office Action the Examiner states drawings figures 1-28 are missing. Appended to this Amendment and Reply are thirteen (13) sheets of drawings substantially identical to the drawings of International Application No. WO 01/01544, from which this National Phase Application claims priority. These drawing sheets were submitted with the filing of this National Phase Application. Thus, no new matter is submitted.

Also appended to this Amendment and Reply is a proposed drawing amendment wherein FIGS. 1, and 5-10 are proposed to be amended by adding labels indicating that these figures depict prior art amplifiers. Acceptance of these drawing figures and entry of the proposed drawing amendments is respectfully requested.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the requirement for drawings under 37 CFR 1.81.

Rejections under 35 U.S.C. §102 (e):

In the Office Action, the Examiner rejected Claims 33-37, 52, 54, 91, 93, 94, 102 and 112 under 35 U.S.C. §102(e) as being anticipated by Tan et al. (U.S. Patent No. 5,838,558). These rejections are respectfully disagreed with, and traversed below.

Tan et al. disclose a full-bridge converter that performs soft switching based on pulse width modulated switching signals. Specifically, Tan et al. are seen to describe that a DC power supply (16) is connected in parallel with a switching bridge (Q1, Q2, Q3, and Q4) and a bridge capacitor (18). See, for example, Tan et al. at FIGS. 1 and 2A-2F. The load (51) is connected to output nodes of the switching bridge through a transformer T (13), diode bridge (D5, D6, D7, D8, and D9) and an output filter (Lf, Cf).

With respect to independent Claims 33, 54 and 93 the Examiner states that “Tan et al. (Fig. 2A) disclose a bridge circuit comprising: an output power supply (Vout); phase-load (51); switching bridge (Q1-Q4); capacitor (18) can be read as a bridge capacitor; filter (34); wherein the node connections are inherently seen.”

Even if Tan et al. were seen to disclose this combination, which characterization is not admitted, Tan et al. are not seen to expressly or implicitly describe or suggest the present invention as recited within all of the elements of independent claims 33, 54 and 93 where, for example, a load (5) is directly coupled with the power supply (1) allowing DC current through the load (5) for supplying the switching bridge (3). In fact, Tan et al. are not seen to provide more than any of the prior art amplifiers, described in the Background Section of the Specification and illustrated in FIGS. 1 and 5-10 of the present invention, having loads at their outputs.

Since Tan et al. fail to expressly or implicitly describe or suggest each and every element of independent claims 33, 54 and 93, Applicants respectfully request that the rejection of these claims be reconsidered and withdrawn.

Dependent Claims:

Since independent Claims 33, 54 and 93 are patentable over Tan et al., the claims that depend from, and further limit these allowable base claims, are also deemed patentable over this reference.

Additionally, Tan et al. are seen to disclose a first diode pair (D1, D2) and a second diode pair (D4, D3), shown in Tan et al. at FIG. 2A, connected between positive and negative nodes of the power supply (16). In respective disagreed with the Examiner characterization, such construction as described in Tan et al. is not the same as the construction or elements of the present invention and, in particular, a first diode pair (71, 72) as recited in Claims 34 and 35, which are connected to the switching bridge (3). See, for example, the instant invention at FIG. 11.

Tan et al. also disclose a first MOSFET pair (Q1, Q2) and second MOSFET pair (Q4, Q3), see for example Tan et al. at FIG. 2A. The MOSFET pairs (Q1, Q2 and Q4, Q3) are connected between positive and negative nodes of the power supply (16). In respective disagreed with the Examiner characterization, such construction as described in Tan et al. is not the same as the construction or elements of the present invention and, in particular, a first MOSFET pair (31, 32) as recited in Claims 36 and 37, or the first MOSFET pair (31, 32) and a second MOSFET pair (33, 34) as recited in Claim 102, which are connected to the switching bridge (3). See, for example, the instant invention at FIGS. 11 and 12.

Tan et al. also disclose a transformer (13) having a primary coil connected between output nodes of the first and second MOSFET pairs (Q1, Q2 and Q4, Q3), see for example Tan et al. at FIG. 2A. Additionally, Tan et al. disclose a secondary coil of transformer (13) connected between diode (D5, D6, D7, D8, D9) nodes. In respective disagreed with the Examiner characterization, such construction as described in Tan et al. is not the same as the construction or elements of the present invention and, in particular, that a first phase (51) of the load (5) and a second phase (52) of the load (5) as recited in Claims 52, 91 and 112, are connected to the switching bridge (3). See, for example, the instant invention at FIG. 13.

Therefore, since Tan et al. are not seen to expressly or implicitly, teach or suggest each of the specific claimed elements, Applicants respectfully request that the rejection of these claims be reconsidered and withdrawn.

Prior Art Cited, But Not Relied Upon:

Applicants have considered the other prior art documents cited but not relied upon by the Examiner.

Steigerwald et al. (U.S. Patent No. 4,864,479) are seen to describe a DC power supply (+Ed, INPUT GROUND) connected in parallel with a switching bridge (S1, S2, S3, S4) and a bridge capacitor (Ci). See, for example, FIG. 1. The load (not shown) is connected to output nodes of the switching bridge through a transformer (T), diodes (OD5, OD6) and an output filter (Lo, Co).

Stengel (U.S. Patent No. 5,442,317) are seen to describe a DC/DC power converter (436) is connected in parallel with a switching bridge (424, 426, 428, 430) (illustrated in FIG. 4) and a bridge capacitor (510) (illustrated in FIG. 5). A load (442) is connected directly to the output nodes of the switching bridge.

Berning (U.S. Patent No. 5,612,646) is seen to describe a DC power supply (28) connected in parallel with a switching bridge (20, 22, 24, 26) and a bridge capacitor (49) through a load (40). See, for example, FIG. 2.

Jain et al. (U.S. Patent No. 6,016,258) are seen to describe a DC power supply (10) connected in parallel with a switching bridge (31, 32, 33, 34) and a bridge capacitor (36, 38). See, for example, FIGS. 2, 6 and 7. A load (not shown) is connected through a transformer (14), diodes (20, 22) and an output filter (24, 26).

The Examiner is agreed with that this additional prior art does not negatively affect the patentability of the present invention as recited in pending claims 31-113.

Additional Papers:


Applicants' representatives noted a typographical error in the Attorney Docket No. appearing in the present case. Appended hereto is a request for correction of this error.

In view of the foregoing, it is respectfully submitted that the present application is in condition for immediate allowance. Early and favorable action is hereby respectfully requested.

Applicant has made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited. To expedite prosecution of this application to allowance, the Examiner is invited to call the undersigned attorney to discuss any issues relating to this application.

Respectfully submitted,
Milan PROKIN et al.

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